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AUTHOR DeStefano, Johanna S.
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ABSTRACT

Satellite telecommunications are part of an integrated grid of technologies that make possible what many call the Information Age. The English language is the dominant language of this age and of global telecommunications, based in part on its already clear role as the major "universal" language, especially in science and technology. English currently has widespread acceptance as the primary "link language" in the world, being no longer tied predominantly to native speakers of the language. The impact of its spread into the Third World and developing countries via global satellite technology is discussed, especially as the spread has been accelerated by these countries' desire for development and modernization. The emphasis on national sovereignty in many countries (with an attendant emphasis on indigenous languages) is also discussed as running counter to the spread of English. Three images are presented for the spread of English: (1) the kaleidoscope image, in which message transmission is viewed as the transmission of poorly articulated values of dominant cultures; (2) the window image, in which the language itself is seen to be a transparent, neutral vehicle for communication; and (3) the mirror image, in which the language reflects the values of British and American cultures. It is concluded that English serves as a mirror and kaleidoscope in some contexts, but that most frequently it serves as a window. (46 references) (Author/GL)

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The growth of English as the language of global satellite telecommunications *

Johanna S. DESTEFANO

Mershon Center, Ohio State University, 1945 N. High Street, Columbus, OH 43210, USA

Satellite telecommunications not only have shrunk the world but are also part of an integrated grid of technologies which make possible what many call the Information Age. The English language is the dominant language of this age and of global telecommunications, based in part on its already clear role as the major "universal" language, especially in science and technology.

English currently has widespread acceptance as the primary "link language" in the world today, being no longer tied predominately to native speakers of the language. The impact of its spread into the Third World and developing countries via global satellite technology is presented and discussed in detail, especially as the spread has been accelerated by these countries' desire for development and modernization.

On the other hand, in many developing countries there is also an emphasis on national sovereignty with an attendant emphasis on indigenous languages, which can run counter to the spread of English. These issues of language spread and maintenance are discussed, so that the convergence of the global satellite telecommunication technologies and English within developing countries and their impact on these peoples are further clarified.

Keywords: English, world languages, satellite and politics, telecommunications and culture

Mass telecommunications have shrunk the globe dramatically by bringing cultures into contact almost instantaneously via satellite. As Dr. Joseph Pelton of INTELSAT puts it:

> "*The world of global talk and global think is arriving in a big way – at least for a significant proportion of the world's population. Cultural differences, language barriers, national marketing strategies, and almost everything else are today enormously influenced by electronic global communications*" [33].

L. Kubchandani, of the Centre for Communications Studies at Pune, India, argues there is an "*... Overbearing leveling effect of mass media on cultural uniqueness and pagentry*" [22]. He calls this effect of the communications revolution "*communication imperialism*" [22, p. 66].

Dr. Thomas McPhail of Canada has termed this impact of mass telecommunications "electronic colonialism". He states:

> "*Electronic colonialism is the dependency relationship established by the importation of communication hardware, foreign-produced software, along with engineers, technicians, and related information protocols, that vicariously establish a set of foreign norms, values, and expectations*

Dr. Johanna S. DeStefano is a Senior Faculty Associate, The Mershon Center for Programs of Research and Education in Leadership and Public Policy, and a Professor, the Ohio State University. She recently stepped down as Chair of the Steering Group, Committee for International Tele-Education and was the founding Chair of the International Reading Association's Committee on Telecommunications Technology and Literacy Education. In the arena of English abroad, she serves on the Advisory Board of the English Language Program, United States Information Agency. A sociolinguist, she is an author of articles and a speaker on the use of telecommunications satellites in language learning and on policy issues involved in the spread of English via the technology.

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which, in varying degrees, may alter the domestic cultures and socialization processes" [29, p. 18].

Telecommunications, particularly satellite communications, not only have shrunk the world but are also part of an integrated grid of technologies, including computers and fiber optics, which make possible what many call the Information Age. As Dr. Pelton [33] has suggested, this Age is based on an information revolution as surely as the past Age is a derivation of the industrial revolution. And probably because we are totally caught up in a communications revolution, the capabilities made possible by the technologies have outstripped their thoughtful use and certainly much in the way of policy planning regarding their use. This turn of events could well be what led noted communications scholar Wilson Dizard Jr. to state "*Success in our generation will depend on the degree to which we shape the new information technologies in accordance with human values*" [5, p. 11]. There is strong feeling in many developing countries that their human values are not being taken into account (c.f. McPhail [29]; Schiller [34]; Shaw [35]; Tsuda, [40]).

It is also possible that *glasnost* in the Soviet Union is, in large part, a direct result of information exploding through the fingers of the bureaucrats whose sole job in the past has been to keep information from getting out. The explosion of information via technology has forced the old time and type of censors into the ranks of the unemployables. Unfortunately, future censors will undoubtedly appear, but from new quarters.

McPhail [30] suggests that not only is telecommunications capability far beyond thoughtful use at this time but that "electronic colonialism" is definitely operating to change cultures and their values, even when demanded by and not imposed on a people. For example, the Inuit peoples of the Northwest Territories desire their own *entire* satellite channel. On its face, that sounds like they are trying to take control of their own destiny even more by utilizing this technology, grasping the ownership, access and control that Tonkin [39] indicated was a major question today. However, the single channel will require *all* their funds for education, thus leaving them with no money for new schools, health care programs, libraries, or even field trips. So while there is an appearance of progress, of modernization if you will, for the Inuit, it may actually represent a step backwards in terms of the types of educational experiences they would benefit from the most and certainly is not the type of experience they traditionally have valued. Thus the satellite, depending upon its use, could actually diminish their culture and its values rather than support and sustain them. So we see a clear example of the tension between values such as modernization and sovereignty.

If the Inuit achieve their own satellite channel, at least they will be using their own languages – presumably. However, in many cases the use of telecommunications technology obviates the use of indigenous languages. Why? To quote Tonkin:

> "*Given the overwhelming dominance of the United States both in the production of hardware and in programming for mass communications, it is little wonder that the English language dominates the field and that issues of language differences seldom enter the consciousness of mass media producers and planners*" [39, p. 73].

And one could add "... of the consumers as well".

The "issues of language differences" are not forcefully raised or perhaps even acknowledged as issues of any importance with regard to the spread of satellite communications for entertainment and for education. Do we have an unforseen extension of electronic colonialism? Or was English already in a position of some dominance around the world, so is the reinforcement of a process already under way? And what effect does the spread and use of English have on values held in countries at the "receiving end" of telecommunications technology? These were, in part, questions also raised in the so-called McBride Report for UNESCO on the New World Information Order which states

> ... *the use of a few so-called world languages is essential in international communications, yet it poses sensitive questions concerning the individuality and even the political and cultural development of the countries*. [28, p. 51].

The United States and Britain, with some of the Western European countries plus Japan, dominate as "senders" of information, data and programming via telecommunications to other

countries in the world. It's pertinent here to briefly describe some of the dominance of the English language as the language of the "senders" that Tonkin mentions above, as I believe that is much less widely understood. Strevens [38, p. 57] notes "*As the telecommunications revolution got under way, English became dominant in the international media, radio and TV, magazines and newspapers... so, too... [in]... space science and computing technology*". English is not only in space science, but literally in space itself. The probe we've launched to make possible contact with other intelligent beings in outer space carries a message of peace and greetings in *English* from Kurt Waldheim, then Secretary General of the United Nations. So if any being ever does "listen" to it, the first words from earth they'll hear are in English.

Most international news is gathered and disseminated by Associated Press, United Press International, and Reuters – all headquartered in the United States and Britain and written in English (Tunstall [41]). Further, the percentage of international electronic messages written in English is well over 70% (Starr [36]), whether or not they originate in English-speaking countries. These are only two instances of the use of English in telecommunications on a world-wide basis and do not include television programming, which is predominately English based.

But English is dominant far beyond its use in the telecommunications industry. As Braj Kachru puts it, "*For the first time a natural language has attained the status of an international (universal) language essentially for cross-cultural communications*" [20, p. 85]. As Wardhaugh has put it, "*English has become the lingua franca of the modern world*" [44, p. 137], "... *by far the most widespread of the world's languages*" [44, p. 128]. There is, in fact, no reason to dispute the judgments of these two sociolinguists. To paraphrase the Coke ad, "*English is it.*" In fact, the language may have as much instant recognition as the drink.

English as a language plays an important role in the articulation of values into policies and actions in many countries. As Tonkin puts it:

> "*The truth, of course, is that language plays a vital, but often unrecognized, role in all aspects of human rights, in national development, in communication and communication policies, in education, in the creation of political institutions, in political participation, in decolonization, in the building of a new international order.*" [39, pp. 73–74].

It is now time to explore this "vital, but often unrecognized role" that English plays in the interaction of values such as sovereignty and development in developing countries. So what is the effect of using English? What role does it play? Is it a mirror? Does it reflect the British and American cultures and their values, implying their acceptance? Does one look in the mirror and see someone who is Indian but more stereotypically British than the British? Do English users in developing countries "reflect" all that can attach to the language? There are those who feel this is virtually impossible to avoid.

Or is English a window? Can the language be transparent, a more neutral vehicle for communication, a tool to be used by whomever wishes to use it? A window on the larger world? There are those who feel this is at least possible.

Or is it a kaleidoscope, given a "fractured," distorted image of the message? Some argue that this is the true case. They believe that message transmission is not primarily linguistic or structural in terms of sentence structure, but that it conveys values which are not clearly articulated, so inevitably leads to distortion in the cultures which learn English as a second or foreign language. Perhaps it is something akin to the planet Bizarro in the Superman comics – the same and yet not.

In order to begin to answer these important questions about the impact of English on values, particularly in developing countries, one needs to understand the current status of English as a world or international language or, as it's sometimes called, an LWC, Language of Wider Communication. How did it get to the point that people on a global basis see it so differently? Reactions run the gamut from those who welcome it as a unifier in a country fraught with internal dissention to those who vilify it as a robber of local dreams and ideals, a desecrator of indigenous cultures, a spreading stain on the face of the

world. Why is it so largely the language of global satellite telecommunications?

First, English is widely recognized as a major international language, in fact the primary "*link language*" in the world today (Fishman, Cooper & Conrad [13, p. 56]). It's become an "*instrument of access*" for people almost everywhere (Weinstein [45, p. 90]), no longer tied mostly to native speakers of the language. It is calculated that now non-native speakers outnumber native speakers, a sure sign that a language can be classed as "international" or a "world language."

Not only is English the most widely used language, but it is argued that its position is unique in human history. As Wardhaugh puts it:

> "*What is remarkable about English and what makes it unique is the extent to which it has spread throughout the world. No other language has ever (emphasis added) been spread so far and wide. No other language has ever had the influence on world affairs that English has today*" [44, p. 131].

He goes on to estimate that "*well over 300 million*" people speak English as a first language [44, p. 134]. As we would expect, a majority are in the United States, with most of the remainder in Great Britain, Australia, Canada and New Zealand. There are pockets of native English speakers elsewhere, as in South Africa, Zimbabwe, and so on.

English is an international language however, because more people speak it as a second, third, fourth or even fifth language than as a first language, making for a total number of speakers "*well in excess of 700 million*" (Wardhaugh [44, p. 135]). In fact, he states this to be the smallest figure one can arrive at.

> "*... there seems to be little doubt that about one-fifth of the world's population of better than five billion people has reason to use some English almost every day*". [44, p. 135].

These figures still put English behind Mandarin Chinese in numbers, but Chinese does not have the link language status, being spoken largely on the mainland of China within the borders of one country. On the other hand, if one takes Peter Streven's figure of 1.5 billion users of English, then it is even ahead of Chinese [38, p. 56].

Other languages such as Spanish, Hindi, Arabic and Portuguese (in Brasil) may soon surpass English in terms of numbers of native speakers (Wardhaugh [44, p. 135]), but none so far have the international language status of English. English has an official status, either by law or by use, in more countries in the world than any other. It is the single official language in 25 countries and a co-official language in 17 more countries. Its nearest competitor is French which is official in 19 countries and co-official in 9 (Wardhaugh [44, p. 135]).

What brought about this apparently unique situation that applies to English but not to Russian, Japanese, French, Arabic, or Swahili? Is it language brought to you courtesy of the British empire and the American corporation? As Fishman, Cooper and Rosenbaum put it, "*The great world languages of today are languages of empire, past and present*" [14, p. 77].

Definitely the British empire started the spread of English, with one of its strongest branches now American English. But it also spread to countries with major indigenous populations such as India, a variety of African countries, and many others where it became firmly entrenched as the language of government, at least of higher education, if not the entire educational system, of the legal system, and so on. Much of this use still exists today. India recognizes English as one of its official languages, actually linking the country together as indigenous languages are even more fraught with emotion. Although only about 3% of the population is actually bilingual in English and Indian languages (Kachru [20, p. 52]), approximately 50% of the books published in India are in English, while much of government and higher education is conducted in English. Other examples abound, as in Malaysia, Singapore, Nigeria, and elsewhere.

But even though the tide of empire has receded, English has gotten ever stronger as a link language. We can in part explain that by the passing of the mantle from Britain to the United States. As Wardhaugh states, "*The 'centre' of English has shifted across the Atlantic...*" where "*... the North American variety benefits from its associations with science, technology, the media, and raw political, economic, and military power*" [44, p. 129].

U.S. control over much of mass media has been noted above, and that control is usually by companies whose business it is to create and sell news, information, programs, films, and so on. But other U.S. business es have their impact as well. Currently the language of most international banking is English whether it has anything to do with a U.S. bank with overseas branches or not. We further find it used in the airline industry on a world-wide basis. As Weinstein puts it:

> "*Ignorance of English eliminates one from the competition for the highest positions in banking, aviation, and international commerce in non-English-speaking countries. IBM employees from France to Korea are sent to language school by the corporation to learn American English*" [45, p. 68].

McPhail has noted that IBM's presence in the spread of English is even more pervasive in that the manuals and technical instructions accompanying its computers is in English. So even in Quebec, which can be militantly francophone, French speaking technicians use English computer manuals. Furthermore, many Quebecois play Apple computer games – in English.

Possibly because of this former imperial and current economic influence from which English has emerged as the world's major link language, we find its use for special purposes such as Airspeak and Seaspeak. Both of these international "codes" are specialized forms of English used, respectively, by air crews and ship crews. In the case of Airspeak, in all international flights, the pilots and control tower personnel speak to each other in English. Consequently, an Italian pilot flying an Alitalia plane will use English when landing in Milan on a flight, say, from Yugoslavia. So too will the control tower personnel at Malpensa, Milan's international airport. And so does the rest of the aviation world, even if all parties involved share a common language. This use has arisen from an obvious need; as international air travel has grown, a common language is the only practical way to proceed. Air crews and ground crews cannot learn all the languages needed to fly aircraft safely. Given the current status of English, it's the clear choice for Airspeak.

It was also evidently the clear choice for Seaspeak, the specialized language adopted for use by ships the world over for most communication. International shipping traffic has increased greatly, as has air traffic. INMARSAT, the international marine satellite system which keeps track of ships and boats by satellite, uses Seaspeak as do ships' captains who need a common code for ship to shore communications, and ship to ship as well. During the height of the "tanker war" in the Persian Gulf, we heard on the nightly news tanker captains from a variety of countries get on their radios to urge the U.S. warship captains attacking Iranian gunboats to "give it to them," and so on.

INTELSAT, the international satellite consortium which operates satellite services in 175 countries and territories universally, uses English as its operating language. So we find a wedding of communications technology and the movement of information with the English language.

All of this leads us to the clear conclusion that English is viewed as **the** language of science and technology, the two being obviously connected. Weinstein comments that "*English [is] now considered more appropriate for scientific communication than other languages, even those with rich scientific traditions*" [1983, p. 21]. Wardhaugh details this hegemony; he notes that in 1980, 72.6% of the articles listed in the *Index Medicus* were in English. The next largest figure was 6.3% for Russian! He goes on to assert "*It is difficult to understand how a scientist who cannot read English or who does not have immediate access to good translations from English can hope to keep up with current scientific activity*" [44, p. 136]. Tsuda, who largely bemoans the spread of English, elaborates on this problem, asserting that English's dominance in science is so complete that it prevents scientists who speak other languages from not only keeping up with the literature but also from participating fully in scientific meeting and journals, from actually making their work known or from getting the attention it may deserve [40, p. 2].

Fishman, Cooper and Conrad, in their seminal volume on the global spread of English conclude "... *English is considered to be more acceptable for technology and natural science use than for political*

and social sciences use, and that it is least acceptable of all for local humanistic and religious purposes" [13, p. 124]. Certainly this is what Shaw [35] found among Asian students. He conducted a study of Indian, Singaporean and Thai students' attitudes toward English, finding that many of the top-ranked reasons for studying the language were based on what is called instrumental motivation rather than integrative. It's seen as a needed language in business and education, both of which tend to rest on science and technology. But these students did not feel knowledge of English would "*make me a better person*" (Shaw [35, p. 23]), which is considered to be an integrative motivation. Thus English could be characterized as being thought of as a language in which to get things done, e.g. the language of development which flows from scientific discoveries and the use of technology.

So English is widely perceived as the major scientific and technical language of the world today, the major link language for development, and is in fact the language carried via power technology forms – telecommunications – which are considered to play an important role in development. What might this dominance in both the production and use of this technology mean for people in developing countries and the values they hold? In order to begin to answer this question, we must determine whether English is a mirror, a window or a kaleidoscope. Is it a "loaded weapon", as indicated by the mirror and kaleidoscope metaphors, as many claim, or can it be relatively neutral, like a window?

This is clearly a hotly contested issue. Believers in linguistic determinism or so-called linguistic relativity have been very concerned with this subject. Their position was articulated in the writings of Edward Sapir (Mandelbaum [25]), a leading social scientist of the day. Benjamin Lee Whorf [46] popularized the position with his subsequent writing. Sometimes this view of language is called the Sapir-Whorf or Whorfian hypothesis. Simply stated, the hypothesis asserts that language strongly influences thought. Sapir said "... *forms predetermine us to certain modes of observation and interpretation*" [25, p. 7].

Linguistic determinism is a very popular and prevalent position, one which holds that at best language is a mirror and at worst a kaleidoscope, operating on both thought and culture. So when one learns English as a foreign language and metaphorically looks in the mirror, one will see, instead of a Nigerian or a Malay, an English person or an American with those values, beliefs and so on. As a kaleidoscope, English is held to distort a person's thinking about their own culture, to "fracture" their world view. Or put another way as the other side of the coin, "*Language makes a people, and a people without pride in its language is dispossessed of its national pride. Preserving one's language is preserving one's culture*" (Hofman [15, p. 277]). This was said by a Shona-speaking teacher trainee in Zimbabwe reacting to the continued use of English there.

Others make essentially the same point. For example, Laitin [23, p. 162] hypothesized:

> "*A country's choice of one national and official language over another meant the choice of one behavior over another; therefore, the continuing position of European languages as official in most countries is a "partial explanation for the persistence of colonial values and institutions in independent Africa.*"

That these assertions about the effects of a language on thought and culture are widely held, including by many high educated people, needs to be understood. A clear example: approximately four years ago the government of Malaysia began to use Bahasa Malaysia, the relatively newly proclaimed national language, for university-level education which had been in English, a leftover from days of colonial rule. Cohen, reporting in the *Chronicle of Higher Education* [3], did an excellent job of detailing the problems now being faced at the university level because of that decision, not the least of which is a major dearth of advanced materials in Bahasa Malaysia. But she concluded the article with:

> *Despite Malaysia's problems in replacing English as the medium of undergraduate instruction, many academics here think the change is politically and pedagogically sound.*
>
> *Says Mr. Aziz, a University of Malaysia*

economist: "You cannot have a cultural identity, a personality, in someone else's language" [3, p. A30]

This seems to imply that when you study in English, for example, rather than your own language, by making that shift you wouldn't see **yourself** in a mirror, as your personality and identity are "given" you by the other language. Wardhaugh says just this, that "*there is a **widespread belief*** (emphasis added) *that a shift in language often brings about a shift in identity...*" [44, p. 5].

The important question is whether or not this widespread belief in linguistic determinism is accurate. A corollary question is whether linguistic inequality is part of this determinism. It is clear that inequality exists, if for no other reason than that English is acknowledged as the world's major link language and is so widely used in official, as well as unofficial, capacities. Inequality also exists in vocabulary size, with English again acknowledged as the language with the world's largest vocabulary, although an accurate word count is difficult to determine. However, clearly it's larger than any other, perhaps even twice as large as the next largest, reputed to be French.

How does all this stand against the "*alternative 'value-free' view of English in the world*" as Wardhaugh puts it [44, p. 132], or the "English as a window" argument? Strong evidence for its validity is found in the existence of a wide variety of local Englishes. They have arisen or are arising all over the world, are very different from one another, may be becoming standardized, and are definitely indigenous (DeStefano [4, p. 119]). They began as English impacted by the surrounding local languages. Thus there are such versions as Indian English, Philippine English, and West African English. Indian English has at least strong Hindi Influences in it. Philippine English has influences from Tagalog, an indigenous language. West African English has influences from Hausa, Yoruba and other languages indigenous to Nigeria and other countries in the region. Some of these "Englishes" have become even fairly locally standardized, with a literature as well. These varieties are legitimate types of English which have been changed to fit the non-British, non-American, non-Western environment. They are forms of English that are made their own by the people who use them.

Even without much change, English can be useful. Irish culture and independence are being asserted in English, not in Irish Gaelic. Ireland's indigenous, non-English language is actually dying out, while the people's culture is being achieved in English (Edwards [6]). Obviously there are those who deeply mourn its passing and who wish to preserve it, but Irish Gaelic has clearly lost out to English which is now the language of an independent Ireland able to make its case in the "language of the oppressors". As Ussher expressed the prevailing attitude there, "*the Irish of course like their Irish, but they like it **dead***" [42, p. 107].

Shaw's study of the Indian, Singaporean and Thai students' attitudes clearly illustrates the denationalization process. He reports that the three countries' students did not feel it important to study English so that they could "*think and behave as native speakers do*" (Shaw [35, p. 24]).

Others writing of other continents or subcontinents reflect much the same view. Ali Mazrui, a Ugandan scholar and coiner of the term **AfroSaxon** [26], quotes Moorehouse as correct in asserting that English has been widely adopted in Africa as a "*politically neutral language beyond the reproaches of tribalism*" [26, p. 15], and cites an estimate that around 66% of Black Africa is becoming English-speaking. Kachru, an Indian, contends that developing countries use English to "*teach and maintain the **indigenous*** (emphasis added) *patterns of life and culture, to provide a link in culturally and linguistically pluralistic societies, and to maintain a continuity and uniformity in educational, administrative and legal systems*" [18, p. 155].

If this is the case, that English is being and can be denationalized and used as a relatively neutral vehicle for self-expression, then why do so many people espouse linguistic determinism? Fishman [11] suggests that at times of intense, conscious ethnicization in countries, there may be similar intense feelings against a language of wider communication (LWC) such as English or French. This often coincides with "*urbanization, industri-*

alization, modernization, and political integration efforts" (Fishman, Cooper and Conrad [13, p. 119]).

Language use is confused with the language itself. Thus, in some cases both are discarded, while in other situations such as in Yemen, the language and its use are seen to be separate. Baxter stated it well. "*The* ***use*** (emphasis added) *of English is always culture-bound, but the English language is not bound to any specific culture or political system*" [1, p. 104]. On the other hand, the French language has not passed itself off in a neutral manner at all, but as a policy of the government has been consciously tied to French culture. These differences between the two languages prompted Fishman to quip "*English is less loved but more used; French is more loved but less used*" [12, p. 20]. That neatly sums up the major attitude toward English as a word language. It "gets the job done", so to speak, without a necessity for cultural encumbrances.

Given these sociolinguistic interpretations of the role and use of English, it is important to test how language is used in developing countries in key value areas such as sovereignty and modernization. These two seem to be widely held values throughout most developing countries and merit close scrutiny in part because of the role satellite telecommunications technology plays in each.

Sovereignty as a value is held against the backdrop of former colonial status, with many developing countries having been exactly that – colonies. As colonies they often had imposed on them a European culture and language. Such imposition gave rise to the "brown sahib" that Kachru [19] described, as well as Mazrui's AfroSaxon [26].

With independence, the process of decolonization often began as a way to achieve the value of sovereignty. It's considered very important to be a sovereign state, to have a vote in the United Nations, and to support and maintain the local cultures within the new national boundaries or forge a new national identity, sometimes at the expense of some indigenous groups. Schiller goes so far as to state that "*a paramount concern of these states is to safeguard their national and cultural sovereignty*" [34, p. 39]. So the world has witnessed a strong sense of nationalism arising in many developing countries.

Against these strivings for sovereignty and "real independence", there continues a clear domination of telecommunications from the united States and, to some extent, from Great Britain. The majority of satellite TV distributed world wide, for instance, whether from the U.S., Canada, Australia, New Zealand, the UK or other parts of Europe is English based. The programming in French, Spanish, Chinese or Japanese, which is a clear minority, often has English subtitles. The question has arisen, then, about how a new nation which values sovereignty can achieve decolonization, a process felt to be necessary to assert that desired sovereignty, in the face of what is perceived to be continued domination, now via telecommunications technologies? The Prime Minister of Guyana in 1973 stated the problem this way: "*A nation whose mass media are dominated from the outside is not a nation*" [*Intermedia* (1973) 1].

Out of these fears came UNESCO's concern about a New World Information and Communication Order (NWICO) designed to speed the process of decolonization and promote a healthy sovereignty by enabling individual countries to have more control over the media which reach them via telecommunications, as well as by other means.

However, it's sometimes asserted that sovereignty rests on the use of indigenous languages. When that is the case, communications use can present a very real conundrum because of the hegemony of English in the programming, in the information and data flow, and so on. But is this a needless worry? Do indigenous languages make the achievement of sovereignty more possible? Tsuda argues that they do in that the colonization process leads to "the rejection and disintegration of indigenous culture and language" [40, p. 27]. He reasons that the choice of an indigenous language helps in decolonization. Therefore the use of English in such a situation is a carryover from the colonial period or perhaps even an example of neocolonialism. For example, African scholar J. Hofman has stated it quite clearly: "Africans are haunted by the colonial past" [15, p. 292]. Writing

about Zimbabwe, he further states "*There is considerable awareness that language has an important role to play in whatever national dreams are being dreamt. A national language will help to overcome tribal diversity*" [15, p. 289].

But for many developing countries, the establishment of a national language is not easy. The example of Indonesia's selecting an indigenous language, renaming it Bahasa Indonesia (which means **the** Indonesian language) and actually having it widely accepted within the country is unfortunately unusual.

More common are situations such as those in India and African currently. Since independence from Britain, India has not been able to unify under the Hindi language, which is seen to be given too much power to native Hindi speakers by others who aren't, especially Tamil speakers who constitute a large group in the country. Tamil is a Dravidian language, a totally different family from Indo-European of which Hindi is a member, and spoken widely in Southern India. This serves to underline a north-south split in a country of over 700 million population with a very complicated multilingual pattern. Unification is currently still largely expressed through the use of English as an official language.

Nigeria, the country with the largest population in Africa, has a similar division. Hausa, a Hamito-Semitic language in the same family as Arabic and Hebrew, could be the national language, according to Mazrui [27], but is highly politically resisted by speakers of other Nigerian languages such as Yoruba or Ibo which belong to the African family of languages. As a result, English, the language of the former colonizers, continues to serve as the major link language within the country. This pattern is repeated again and again – and not just with English.

However, the evident solution of use of the language of the colonizers is not a happy one for many countries who value sovereignty. Some seem to be using it only as an interim solution while they develop an indigenous national language, as Shona in Zimbabwe. In fact, Fishman asserts that a national language is widely felt to be needed even for "*mass **mobilization** along the road to modernity*" [9, p. 331]. That does not mean English will not continue as a major link language, but will be used more on an international rather than an intranational basis.

So does the predominant international use of English in telecommunications technologies pose a problem for those countries valuing sovereignty and defining its attainment as including the use of an indigenous intranational language or languages? Is it a countervailing force which is part of a transnational culture conveyed by the technology? Tsuda [40] would argue this is the case. In fact, he argues that technology, which includes communications technologies, exerts neocolonial control by the West. Or as Harlan Cleveland puts it, there is less "*enclosure*" now because of computers linked via global telecommunications. He asserts that power is "*leaking*" from sovereign national governments [2]. Schiller states the case even more forcefully:

> "*Thus, communication and the flow of messages and imagry **within** and **among** nations – especially between developed and dominated states – assume a very special significance. What does it matter if a national movement has struggled for years to achieve liberation if that condition, once gained, is undercut by values and aspirations derived from the apparently vanquished dominator*?" [34, p. 1].

On the one hand then, we apparently have a widespread belief that the use of English may not help countries which value sovereignty and are trying to decolonize. Yet on the other hand, another major value in developing countries and briefly mentioned above is modernization. Obviously there is a great deal of desire to benefit from development, to make progress, which is usually seen to be inextricably tied to modernization.

What is modernization? For one thing, it is often associated with advanced products and services, including computers and software, radios, TVs, tape recorders, satellite dishes, and other information communications technology forms. For another, Dizard defines it as:

> "*... the doctrine of organized univeral betterment. As a worldwide civil religion, it is more influential than nationalism or such limited movements as democracy, fascism or communism. It shows itself as a psychic mass migration toward a*

better life. Once this idea makes contact with a society, it diffuses in ways that irrevocably affect traditional institutions and values. It becomes the universal social catalyst, changing everyone it touches" [5, p. 16].

Or put another way:

"*What they all want... is what the Americans have got – six lanes of large motor cars streaming powerfully into and out of gleaming cities; neon lights flashing, and juke boxes sounding and skyscrapers rising, story upon story into the sky. Driving at night into the town of Athens, Ohio, four bright colored signs stood out in the darkness – "Gas", "Drugs", "Beauty", "Food". Here, I thought, is the ultimate, the* **logos** *of our time, presented in sublime simplicity. It was like a vision in which suddenly all the complexity of life is reduced to one single inescapable proposition. These could have shone forth as clearly in Athens, Greece as in Athens, Ohio. They belonged as aptly to Turkestan or Sind or Kamchatka... there are, properly speaking, no Communists, no Capitalists, no Catholics, no Protestants, no Black men, no Asians, no Europeans, no Right, no Left and no Center... There is only a vast and omnipresent longing for Gas, for Beauty, for Drugs and for Food*" [31, p. 125].

These two views of modernization by Dizard and Muggeridge capture much of the essence of the "value" of modernization. It also rests on technology, and now especially information technology which is part and parcel of global telecommunications technology. What language does most of modernization and technological development occur in? English is the language of development, of technology, of modernization, although it is in no way inherently better able to express technological thoughts than other languages. But it does have a "muscular" technological vocabulary already in place and ever growing. Edwards clearly states prevailing attitudes about the place of English vis-à-vis many indigenous languages:

"*Even where indigenous varieties have achieved a developed status they are still not necessarily equal in all senses to external languages. Standardised Guarani and Somali are very much less useful, in a broad perspective, than are Spanish or English, particularly given the desired social mobility and modernisation which now seem to be global phenomena*" [6, p. 85].

That connection will probably become even stronger because of the increasing dominance of telecommunications in helping to achieve modernity. Along with global telecommunications comes the shrinking world, the so-called global village, and what Cleveland calls "*the passing of remoteness*" which he claims is one of the "*great unheralded macrotrends of our extraordinary time*" [2, p. 76]. Along with all this comes what others call a "transnational form of culture".

The dominance of English clearly shows the direction of dominance in telecommunications, both hardware and software, so to speak. The First World, and in some cases the Second World, brings its modernizing tools to the Third World, delivering what McPhail would argue is electronic colonialism. The degree of dominance can be illustrated by a commentary piece from *Broadcasting* magazine. John Eger, author of the commentary, writes:

"*Throughout the world, the free flow in information seems to be under fire, and the channels of trade in communications goods and services are clogged. Because the communications revolution is most advanced in the United States, it is often our publications, our films, our advertising, our data-bases, our satellites, our telecommunications systems and our policies that seem under attack*" [7, p. 24].

Clearly there is an attack against the perceived transational culture so aptly described by Muggeridge. Yet, antithetically there remains an uncritical desire for modernization, for telecommunications and information. This information rich culture of the developed world is purveyed by telecommunications and is felt to be a great leveler, but not an equalizer. It is seen to be a threat to sovereignty, to the rise and development of indigenous languages, and to the preservation of indigenous cultures.

Where does this leave English-dependent developing countries who hold the values of sovereignty and modernity? Clearly with a major dilemna. As Levi-Strauss puts it, "*We are doubtless deluding ourselves with a dream when we think that equality and fraternity will some day reign among human*

beings without compromising their diversity" [24, p. 23]. Read "transnational culture" for "equality and fraternity," as one could argue such a culture is the major way to achieve these values. Krishnaswamy and Aziz call for just that, however, when they assert "*Without losing their identities, nations want harmony; without losing their* ***valuable values*** (emphasis added) *and cultural heritage, people want better relationships. They want to be Indians / Arabs / Japanese / Chinese etc. and at the same time international*" [21, p. 100].

Many serious issues are raised by the use of English as a world language. These include the hegemony of global telecommunications and the world's information structure, the importance of English in development and modernization, and the role of English in the political and cultural future of developing countries. Will it continue to grow as it has in the past, or will it "*wither away*" as Marx said the state would?

As one would assume, there are those who feel English will continue to spread. Wardhaugh certainly subscribes to this position. "There is no indication that English is in any way ceasing to spread; indeed, it seems to be on the ascendant in the world with no serious competitor" [44, p. 128]. In a world where the United States is the largest debtor nation in existence and where Japan seems to be rapidly moving ahead in economic growth and strength, it seems a view that requires some moderation. Yet when Shaw [35] asked his Indian, Thai and Singaporean students what they thought the future of English was, a majority of all three groups felt that English would continue to be a world language even if the United States and Britain lost their power. Obviously its base is now far beyond the borders of countries in which it is a national language, as discussed above. And as the number of non-native speakers continues to increase over the number of native speakers, it "*... increasingly becomes a language belonging to those who use it and not just to those who claim it as their mother tongue*" [35, p. 30].

Even if certain global languages continue to spread, problems will remain in cross-cultural communication. Today technology is being used to address the issues raised by lack of a common form of communication. According to Irwin Feigenbaum and Pamela McCorduck [8], two experts in artifical intelligence, the Japanese are in "*hot pursuit*" of natural language processing systems, including computers which can understand continuous human speech to 95% accuracy. In the March, 1988, issue of the *IBM Journal of Research and Development*, there are several articles dealing with machine translation which show strong movement forward in this area.

Computer of machine translations of natural languages, whether simultaneous or not, have long been worked on as a goal by many linguists and computer experts. Typically there hasn't been as much progress as one might expect, since language is extremely complex. A favorite example of this complexity is the machine translation from English into Russian of "The spirit is willing, but the flesh is weak". One way to check the quality of a machine translation system is by translating the translation back into English. When this was done, it came out "The vodka is good, but the meat is rotten". We still have a long way to go. Yet Logos System, of Dedham, Massachusetts, has recently developed a machine translator for manuals but only for what they call "plain vanilla" English. Now it's solely for Spanish, French and English, but is claimed to speed up translation by five times, with certain aspects still needing to be left to human translators.

If and when reliable natural language processing systems come on line, especially simultaneous translation capabilities for use in face-to-face interaction, it's possible English as a link language could go into decline. That's simply because need for a common code, a common form of communication, might largely be obviated. Thus the technologies to which English in part owes its current hegenomy could actually become the instruments of its recession. Alternatively, however, they allow more people to talk and communicate, leading to more and more information to be stored in English on these interactive computers.

There are other factors which we should consider as well, largely sociopolitcal in nature. Take, for example, the recent call in Sweden for computer commands, now in English, to be changed to Swedish. The article states "*Communication between man [sic] and machine should be in Swedish*

in Sweden" [*Nordstjernan-Svea*, April 9, 1987], and goes on to assert that this is also true for other European countries. If this movement gets stronger, it's possible some of the need for English could disappear as technological terms would be translated into other languages on a regular basis. Add to this the possibility of machine translation, and we have a very different set of needs for a language of wider communication.

These feelings on the part of people in the developed countries of western Europe could be amplified even more by some of the "*neotraditionalization*" movements in other parts of the world, where the value of sovereignty is felt to be a way of decolonializing and consolidating (Tsuda [40]). And if English were to recede as a world language, Fishman suggests that relatively "*few... will shed a tear. The world has no tears left. At any rate, crying takes time and, as all the world has learned from American English, 'time is money'*" [12, p. 21].

What seems clear from a great deal of research is that "*the forces and factors leading to increased* ***knowledge*** *of English,* ***use*** *of English, and* ***liking*** *for English are usually quite different and unrelated to each other*" (Fishman [9, p. 330]). In other words, you don't have to **like** English to **use** English. And its use is also increasingly confined to what Fishman [10] calls a "*co-language*" status, more limited to certain domains of behavior such as technology and commerce, or those areas associated with modernization. Alternatively, the value of sovereignty may be increasingly expressed via the use of indigenous languages, although non-Hindi speakers in India may still decry "Hindi imperialism" when Hindi is "pushed." You can **like** your mother tongue but **use** English, then, in certain circumstances, leading to what Verma [43] called "registral bilingualism", meaning you talk about certain topics to certain people in one language and use another for other topics to other people at other times. Fishman [10, p. 309] puts it this way:"... *the spread of English is likely to establish stable diglossia or even triglossia patterns rather than to intensify linguistic antagonisms such as those that marked the end of the nineteenth and the beginning of the twentieth centuries*".

Conclusion

Does English, in fact, behave as a window, a mirror, a kaleidoscope, or as all three at different times in different contexts? What can be concluded about its impact on values held by developing countries and about its role as the dominant language in global telecommunications?

If it behaves as a kaleidoscope, distorting the message and acting as an instrument of neocolonialism, then the use of English can be counterproductive and harmful. But one can validly argue that English, or any other natural language, does not ipso facto distort messages. The receiver may perceive that anyone who uses English distorts the message or the users themselves may distort, but that is the judgment of the receiver or the decision of the user. And certainly there is a tremendous amount of distortion going on in indigenous languages. One can lie as easily in Somali, Guarani, Thai or Hausa as one can in English, and it has been done. There is nothing more "pure" or "pristine" about indigenous languages; they have a different set of attitudes held about them than does English.

The kaleidoscope image of English is complex. Its users – former colonial "masters" and multinational corporate chiefs, for example – and some of its other uses have been mixed up with the language itself, its structure, its vocabulary, and so on. So when one holds the position of linguistic relativism, this mixup occurs. Certainly then English is a distorter of the truth. But other examples of distortion also abound in all types of languages. Barbaric things may be said in any language, but there are no barbaric languages just as there are no "primitive" languages, because all natural languages are structurally complex and capable of expressing what their speakers need to express. Because there is this potential, however, does not mean that it is realized in every language, as speakers may not have had certain needs or experiences. It *is* not realized always, and that is why, in part, the spread of English has been so extensive because it does have ways of talking about a variety of technical subjects, as well as literature, art, and the full range of human endeavor.

So is English a kaleidoscope? No, it isn't inherently but can be used that way if the user chooses to do so. Then is it a mirror? Does it reflect the West, the values and institutions of the United States and Great Britain when it's used by a non-native speaker? Ali Mazrui argued in his book in 1975 there may be a Westernizing process implicit in the act of learning English. This viewpoint came from the context of language learning which in African is often done in western style institutions as part of an entire acculturation process. He feels that the values English carries with it in Africa are highly dependent on the context of learning the language and its use.

Perhaps learning and using a language cannot be completely separated from the culture of its major native speakers. But a language can be separated from its original culture. Kachru, in the Public Broadcasting System television series "The Story of English" (1986), stated that he felt most Indians had made English their own and had created an Indian-based English which was not tied in any important way to British English. Other sociolinguists cited above make the same case. So is English a mirror into which one looks and sees a "brown sahib"? Perhaps, but not necessarily so.

This leaves the window image. Can it accurately describe the possibilities of English or of any other language? This is the near consensus in the field of language planning and involves the considered views of many sociolinguists. It may be at times a broken window, or a dirty window, depending on the attitudes of the learners and of the teachers, but it is, more often than not, a window. It is a tool for the attainment of goals, the achievement of values, and can definitely be in the public interest to use as a link language at this time in history, as Latin and French were to a lesser degree in times past. It's useful in some domains such as technology, including telecommunications technology, which is deeply involved in modernization efforts. And as Fishman [10] pointed out, the data show that liking and usefulness are not connected. It appears English is being "decolonialized" and even "deWesternized" in that many local "Englishes" are appearing throughout the Third World, having their own standards which are not American English or British English. Wardhaugh [44, p. 15] makes a strong case for this:

> "*English is the least localized of all the languages of the world today. Spoken almost everywhere in the world to some degree, and tied to no particular social, political, economic, or religious system, nor to a specific racial or cultural group, English belongs to everyone or to no one, or it at least is quite often regarded as having this property.*"

The English language today is not only a language of wider communications but also a global language. In some contexts it serves as a mirror and a kaleidoscope, but most frequently as a window. However, in the field of international, regional and national satellite communication, especially direct broadcast satellite, English could be an ever increasing threat to the survival of indigenous languages. Planners of satellite systems must consider more than antenna beam coverage and decibels. Language choice must be a very ingredient of planning the global satellite systems of tomorrow.

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